

ABSTRACT OF THE DISCLOSURE

A method of making a polyurea - polyurethane composite structure that is substantially free from emission of volatile organic compounds is disclosed. The composite structure produced according to the method of the subject invention has a flexural modulus of at least 200,000 lb/in². The composite structure includes first and second layers. A mold substrate is provided and a first-layer polyisocyanate component and a first-layer resin component are reacted and sprayed onto the mold substrate to form the first-layer. The first-layer polyisocyanate component includes an aliphatic polyisocyanate, and the first-layer resin component includes a polyamine thereby forming a polyurea show surface having a Shore D hardness of at least 65. After application of the first-layer, a second-layer polyisocyanate component and a second-layer resin component are reacted and sprayed behind the first-layer to form the second-layer of the composite structure. The second layer resin component more specifically includes a polyol having a theoretical functionality of at least three. The first and second layers of the composite are substantially free of VOCs.